

**AMENDMENTS TO THE CLAIMS**

This listing of claims replaces all prior claims in this application:

1-21 (Canceled)

22. (Previously Presented) A method of treating, managing or preventing obstructive lung disease comprising administering to a patient a pharmaceutical composition comprising an effective amount of:

- (a) heat killed whole cell *Mycobacterium w*,
- (b) sonicated *Mycobacterium w*,
- (c) a solvent extract of *Mycobacterium w*, wherein the solvent is selected from chloroform, ethanol, methanol, acetone, phenol, isopropyl alcohol, acetic acid, urea, and hexane, or
- (d) an enzymatic extraction of *Mycobacterium w*, wherein the enzyme is selected from liticase and pronase.

23. (Currently Amended) The method of claim 22, A method of treating, managing or preventing obstructive lung disease comprising administering to a patient a pharmaceutical composition comprising an effective amount of:

- (a) ~~heat killed whole cell *Mycobacterium w*,~~
- (b) ~~sonicated *Mycobacterium w*,~~
- (c) ~~a solvent extract of *Mycobacterium w*, wherein the solvent is selected from chloroform, ethanol, methanol, acetone, phenol, isopropyl alcohol, acetic acid, urea, and hexane, or~~
- (d) ~~an enzymatic extraction of *Mycobacterium w*, wherein the enzyme is selected from liticase and pronase,~~ wherein the method is for treating, managing or preventing asthma.

24. (Previously presented) The method of claim 23, wherein the method is for delaying attacks of asthma.

25. (Previously Presented) The method of claim 23, wherein the method is for reducing the requirement of drugs used to improve lung function during the management of asthma.

26. (Previously Presented) The method of claim 23, wherein the method is for improving lung function in the presence or absence of other drugs.

27. (Previously Presented) The method of claim 23, wherein the asthma is bronchial asthma.

28. (Previously Presented) The method of claim 22, wherein the pharmaceutical composition comprises an admixture of heat killed whole cell *Mycobacterium w* and sonicated *Mycobacterium w*.

29. (Previously Presented) The method of claim 22, wherein the pharmaceutical composition comprises sonicated *Mycobacterium w*.

30. (Canceled)

31. (Canceled)

32. (Previously Presented) The method of claim 22, wherein the pharmaceutical composition comprises a solvent extract of *Mycobacterium w*, wherein the solvent is selected from chloroform, ethanol, methanol, acetone, phenol, isopropyl alcohol, acetic acid, urea, and hexane.

33. (Canceled)

34. (Previously Presented) The method of claim 22, wherein the pharmaceutical composition comprises an enzymatic extraction of *Mycobacterium w*, wherein the enzyme is selected from litalicase and pronase.

35. (Canceled)

36. (Previously Presented) The method of claim 22, wherein the pharmaceutical composition further comprises an adjuvant.

37. (Previously Presented) The method of claim 36, wherein the adjuvant is selected from mineral oil, mineral oil and surfactant, Ribi adjuvant, Titer-max, syntax adjuvant formulation, aluminum salt adjuvant, nitrocellulose adsorbed antigen, immune stimulating complexes, Gebru adjuvant, super carrier, elvax 40w, L-tyrosine, monatanide (manide – oleate compound), Adju prime, Squalene, Sodium phthalyl lipopoly saccharide, calcium phosphate, saponin, melanoma antigen and muramyl dipeptide (MDP).

38. (Previously Presented) The method of claim 22, wherein the pharmaceutical composition further comprises a surfactant.

39. (Previously Presented) The method of claim 38, wherein the surfactant is polyoxyethylene sorbitan monooleate (Tween 80) or Triton X100.

40. (Previously Presented) The method of claim 38, wherein the surfactant is present in the pharmaceutical composition in a concentration of up to 0.4%.

41. (Previously Presented) The method of claim 38, wherein the surfactant is present in the pharmaceutical composition in a concentration of up to 0.1%.

42. (Previously Presented) The method of claim 22, wherein the pharmaceutical composition further comprises a preservative.

43. (Previously Presented) The method of claim 42, wherein the preservative is Thiomerosal and is present in a concentration of 0.01% w/v.

44. (Canceled)

45. (Currently Amended) The method of claim 22, wherein the pharmaceutical composition is in a unit dosage form comprising at least  $10^5$  *Mycobacterium w*:

- (a)  $10^5$  heat killed whole cell *Mycobacterium w*,
- (b)  $10^5$  sonicated *Mycobacterium w*,
- (c) a solvent extract of  $10^5$  *Mycobacterium w*, wherein the solvent is selected from chloroform, ethanol, methanol, acetone, phenol, isopropyl alcohol, acetic acid, urea, and hexane, or
- (d) an enzymatic extraction of  $10^5$  *Mycobacterium w*, wherein the enzyme is selected from liticase and pronase.

46. (Currently Amended) The method of claim 22, wherein the pharmaceutical composition is in a unit dosage form comprising at least  $10^7$  *Mycobacterium w*:

- (a)  $10^7$  heat killed whole cell *Mycobacterium w*,
- (b)  $10^7$  sonicated *Mycobacterium w*,
- (c) a solvent extract of  $10^7$  *Mycobacterium w*, wherein the solvent is selected from chloroform, ethanol, methanol, acetone, phenol, isopropyl alcohol, acetic acid, urea, and hexane, or
- (d) an enzymatic extraction of  $10^7$  *Mycobacterium w*, wherein the enzyme is selected from liticase and pronase.

47. (Currently Amended) The method of claim 22, wherein the pharmaceutical composition is in a unit dosage form comprising: ~~between  $10^8$  and  $10^9$~~  *Mycobacterium w*

- (a) between  $10^8$  and  $10^9$  heat killed whole cell *Mycobacterium w*,
- (b) between  $10^8$  and  $10^9$  sonicated *Mycobacterium w*,

(c) a solvent extract of between 10<sup>8</sup> and 10<sup>9</sup> *Mycobacterium w*, wherein the solvent is selected from chloroform, ethanol, methanol, acetone, phenol, isopropyl alcohol, acetic acid, urea, and hexane, or

(d) an enzymatic extraction of between 10<sup>8</sup> and 10<sup>9</sup> *Mycobacterium w*, wherein the enzyme is selected from litalicase and pronase.

48. (Previously Presented) A method of treating, managing or preventing obstructive lung disease comprising administering to a patient a pharmaceutical composition comprising an effective amount of heat killed whole cell *Mycobacterium w*.

49. (New) A method of treating obstructive lung disease comprising administering to a patient a pharmaceutical composition comprising an effective amount of:

(a) heat killed whole cell *Mycobacterium w*,

(b) sonicated *Mycobacterium w*,

(c) a solvent extract of *Mycobacterium w*, wherein the solvent is selected from chloroform, ethanol, methanol, and acetone, or

(d) an enzymatic extraction of *Mycobacterium w*, wherein the enzyme is litalicase.

50. (New) The method of claim 49, wherein the obstructive lung disease is asthma.

51. (New) The method of claim 49, wherein the pharmaceutical composition comprises an effective amount of heat killed whole cell *Mycobacterium w*.

52. (New) The method of claim 49, wherein the pharmaceutical composition comprises an effective amount of sonicated *Mycobacterium w*.

53. (New) The method of claim 49, wherein the pharmaceutical composition comprises an effective amount of a solvent extract of *Mycobacterium w*, wherein the solvent is selected from chloroform, ethanol, methanol, and acetone.

54. (New) The method of claim 49, wherein the pharmaceutical composition comprises an effective amount of an enzymatic extraction of *Mycobacterium w*, wherein the enzyme is litalicase.